

## Claims

- 1.Method for handling a location data request or location  
5 request relating to a subscriber in a mobile radio network,  
with which on receipt of a request (SRI) from a first  
location request handling device (GMLC-R5) at a subscriber  
database (HLR) of a mobile radio network for switching  
device address data (MAP(MSC/SGSN/V-GMLC)) of a switching  
10 device (MSC/SGSN/GMLC), via which (MSC/SGSN/V-GMLC) the  
subscriber (MS) can currently be reached,  
instead of switching device address data (MAP (MSC/SGSN))  
the subscriber database (HLR) specifies to the first  
location request handling device (GMLC-R5) in a response  
15 (ACK (MSC(SGSN)) location request handling device address  
data (MAP (H-GMLC)) representing the address (H-HGMLC) of a  
further location request handling device (H-GMLC-R6),  
if it is a request (SRI) from a location request handling  
device (GMLC/R5) of a version (R5), according to which  
20 version (R5) there is provision for the location request  
handling device (GMLC-R5) to receive switching device  
address data (MAP (MSC/SGSN)) from the subscriber database  
(HLR) as a response.
- 25 2.Method according to Claim 1,  
characterized in that the further location request handling  
device (H-GMLC-R6) is a location request handling device in  
the home network of the subscriber (MS).

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3.Method according to one of the preceding Claims,  
characterized in that the further location request handling  
5 device (H-GMLC) stores profile data of the subscriber (MS),  
in particular privacy profile data, which specifies whether  
and under what conditions a location request relating to a  
subscriber (MS) should be processed and/or responded to.

10 4.Method according to one of the preceding Claims,  
characterized in that the first older version location  
request handling device (GMLC-R5) sends the request (SRI) to  
the subscriber database (HLR) after it (GMLC-R5) receives a  
request from an LCS client (LCS client).

15 5.Method according to one of the preceding Claims,  
characterized in that the first location request handling  
device (GMLC-R5) sends a location request to the address  
(MAP (H-GMLC)) of the said further location request handling  
20 device (HGMLC), which (H-GMLC-R6) forwards it to the address  
of a switching device (MSC-SGSN), which was specified (Ack)  
to it (H-GMLC-R6) by the subscriber database (HLR R6) in  
response to its (H-GMLC-R6) request (SRI) to the subscriber  
database (HLR R6).

25 6.Method according to Claim 4,  
characterized in that the request (SRI) contains data

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2002P13122WOUS

PCT/EP2002/009103

(IMSI/MSISDN/etc.) of a subscriber to be located identifying  
said subscriber (MS).

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7.Method according to one of the preceding Claims,  
characterized in that location request handling device  
5 address data (H-GMLC) has the same format as switching  
device address data, in particular an ISDN format or MAP  
data format.

8.Method according to one of the preceding Claims,  
10 characterized in that the version of the location request  
handling device is identified by a subscriber database (HLR)  
from the non-extended format of the request (SRI).

9.Method according to one of the preceding Claims,  
15 characterized in that the version of the location request  
handling device (GMLC-R5) is identified from the Lh  
interface used.

10.Method according to one of the preceding Claims,  
20 characterized in that in the further location request  
handling device (H-GMLC-R6) profile data of the subscriber,  
in respect of whom a location request is to be implemented,  
is verified and the further location request handling device  
(H-GMLC-R6) only contacts the switching device (MSC/SGSN)  
25 specified to it, if the profile data of the subscriber shows  
that a location request relating to said subscriber should  
be carried out.

2002P13122WOUS

PCT/EP2002/009103

11. Device characterized by means to execute all the steps of the method according to one of the preceding Claims.

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The invention relates to a method and devices for handling a request (location request) relating to an address of a switching device (MSC/SGSN), via which a subscriber in a mobile radio network can currently be reached.

US-A-6104932 discloses a mobile radio network, in which further to a request from a GMLC (gateway mobile location center) a home location register HLR notifies the GMLC of an address of the MSC/VLR, in the service area of which a mobile station MS is located.

It is known from the document 3GPP 23.271 available at <http://www.3gpp.org> that in response to a location request (request for location-related data, e.g. the location of the mobile radio subscriber) from an LCS client (location services client) to a GMLC (gateway mobile location center) relating to the switching device MSC/SGSN, via which a subscriber in a mobile radio network can currently be reached, the GMLC requests the address of a switching device currently responsible for a subscriber from a home location register (HLR). A GMLC-R5 (version "R5" GMLC or even older version) sends an SRI request (SRI = send routing information, such as for example a MAP destination address, etc.) to a subscriber database (HLR-R4/R5) of the mobile radio network for the address of a switching device (MSC, SGSN, etc. of a subscriber database (VLR) there), via which

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2002P13122WOUS

PCT/EP2002/009103

a subscriber (MS) (characterized by an MSISDN or IMSI, etc.)  
can currently be reached, whereupon the home location  
register (HLR/R4/R5) sends back in a response  
(Ack(SGSN)/Ack/MSC)) data representing the (MAP/ISDN/etc.)

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switching device (MSC/SGSN) to the location request device (GMLC-R5), which then sends data relating to the location  
5 request via an Lg interface to the switching device (MSC/SGSN) specified to it by the HLR for further handling there (determination of position of current MS position and/or other services) (Fig. 2).

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